

AMENDMENTS TO THE CLAIMS

Claims 1-12 (canceled)

Claim 13 (currently amended): An illuminating and irradiating unit for an ophthalmic instrument with a parallel beam path, the illuminating and irradiating unit comprising:

an illumination source which generates an illumination beam;
means for generating specific illumination patterns and/or profiles; and
means for coupling light from the illumination source a complete one of the specific illumination patterns and/or profiles into the parallel beam path of the observation system of the ophthalmic instrument;
wherein optical filters, diaphragms, and/or optoelectronic light modulators with a control unit are used as the means for generating specific illumination patterns and/or profiles; and
wherein a spectral range and a spatial range of the illumination beam is influenced by the optical filters, diaphragms, and/or optoelectronic light modulators.

Claim 14 (previously presented): The illuminating and irradiating unit according to Claim 13, further comprising:

a monitoring unit for monitoring the radiation dose, for recording the irradiation patterns, and for registering the irradiated positions.

Claim 15 (previously presented): The illuminating and irradiating unit according to Claim 13;

wherein the monitoring unit has one or more interfaces for transferring data.

Claim 16 (currently amended): The illuminating and irradiating unit according to Claim 13;

wherein the illumination source generates narrow-band light in the short-wavelength
range of around 365 nm.

Claim 17 (canceled)

Claim 18 (currently amended): The illuminating and irradiating unit according to Claim 13;

wherein the illumination source generates narrow-band light in the long-wavelength
range of around 690 nm.

Claims 19-20 (canceled)

Claim 21 (previously presented): The illuminating and irradiating unit according to Claim 13;

wherein a beamsplitter which is used for coupling in light from the illumination source
simultaneously serves as a blocking filter to protect the observer from excessive
levels of irradiation by the illumination light.

Claim 22 (previously presented): The illuminating and irradiating unit according to Claim 13;

wherein the illumination source is not arranged within the illumination unit but rather
as a separate structural component part and is connected to the means for
generating specific illumination patterns and/or profiles by means of a light guide.

Claim 23 (previously presented): The illuminating and irradiating unit according to Claim 13;

wherein an eyetracker unit is provided in addition for monitoring the orientation of the illumination patterns on the areas to be irradiated during irradiation and/or for tracking.

Claim 24 (previously presented): The illuminating and irradiating unit according to Claim 13;

which is conceived as a modular unit for retrofit installation in the parallel beam path of an ophthalmic instrument.

Claim 25 (previously presented): The illuminating and irradiating unit according to Claim 13;

which can be used in combination with subassemblies such as a wavefront measuring unit and/or a topography system and/or an eye axis length measurement device for different ophthalmic instruments.

Claim 26 (previously presented): The illuminating and irradiating unit according to Claim 13;

which can be arranged in a shared housing with other subassemblies such as a wavefront measuring unit and/or a topography system and/or an eye axis length measuring device.

Claim 27-29 (canceled)